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# Targeted Food Surveillance on Nitrate and nitrite in meat, meat products and cheese

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Centre for Food Safety

Food and Environmental Hygiene Department

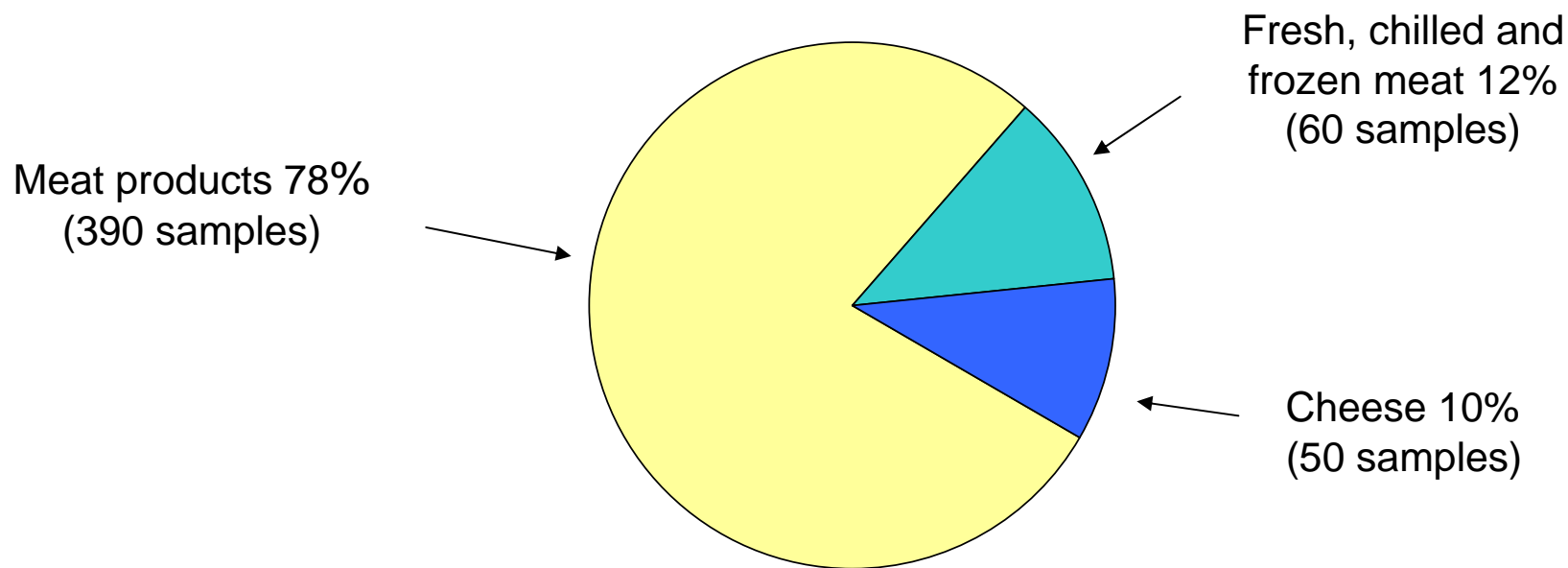
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# Background

- Under the Preservatives in Food Regulation, nitrate and nitrite cannot be added to fresh, chilled or frozen meat. However, their use in cured meat and cheese is allowed, provided that the legal requirements are complied with and the levels concerned do not exceed the relevant legal limits.
- For people who are more sensitive to nitrate and nitrite, such as those with G6PD deficiency, their exposure can lead to the development of methaemoglobinaemia with reduced oxygen-carrying capacity of red blood cells. Besides, infants are also more susceptible to this condition because their digestive and methaemoglobin reductase systems are still immature.
- Long term excessive intake of nitrate and nitrite may also increase the risk of cancer.
- Therefore, a targeted food surveillance project conducted by the Centre for Food Safety (CFS) is continued this year to assess the occurrence of nitrate and nitrite in meat, meat products and cheese.

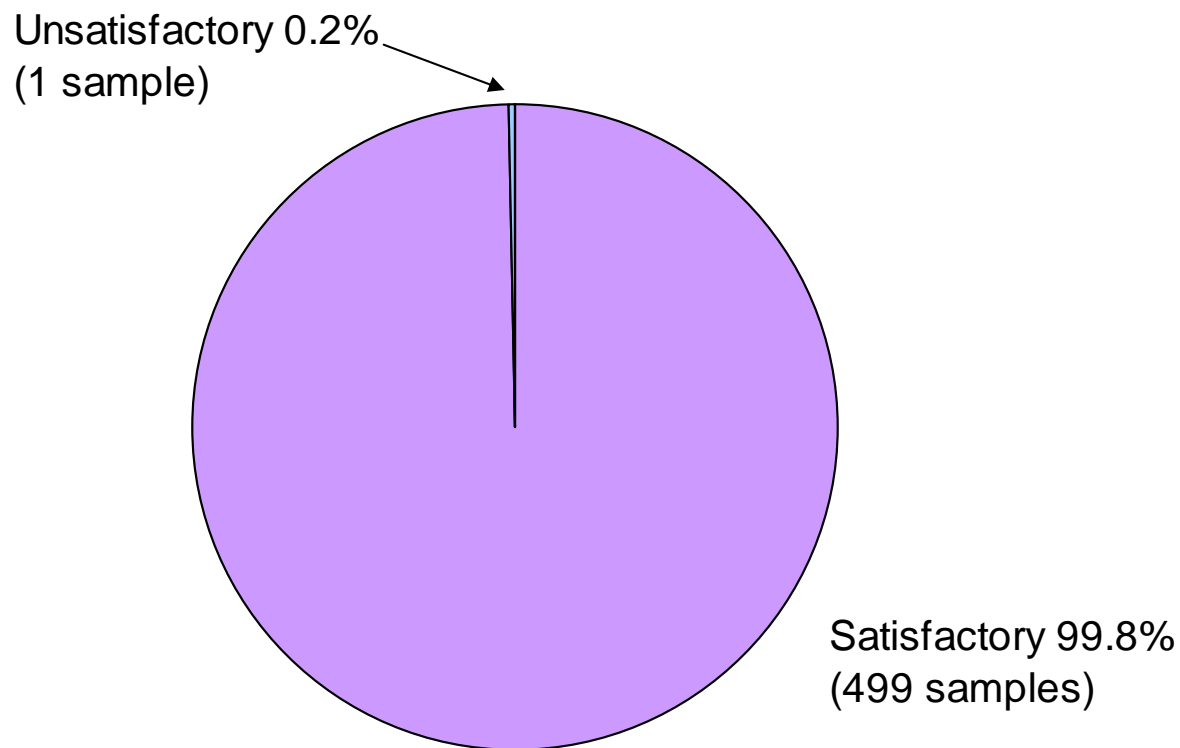
# Types of samples

- The CFS collected 500 samples at different retail outlets including 60 fresh, chilled and frozen meat, 390 meat product (such as bacon, ham, hamburger, preserved meat, Chinese preserved sausage, dim sum, meat ball, canned meat, Siu Mei and Lo Mei) and 50 cheese samples for testing.



# Overall result

- Overall satisfactory rate was 99.8%.



# Unsatisfactory sample

- 1 sample was found unsatisfactory.

Sample	Unsatisfactory testing item	Result
Cheese	Sodium nitrite	24ppm <sup>(1)</sup>

(1) The level exceeded the legal limit (10ppm). Generally, consumption of the cheese will not cause adverse health effects.

# Follow up actions

- Trace source of the food item in question.
- Request vendors to stop sale and dispose of incriminated food items.
- Issue warning letters to concerned vendors.
- Take follow-up samples for analysis.

# Advice for the trade

- Food manufacturers should adhere to the "good manufacturing practice" (GMP) for manufacturing food products. They should not abuse the use of food additives.
- Use of preservatives is regulated under the Preservatives in Food Regulations, Cap. 132BD. Non-permitted or excessive use of nitrate and nitrite is not allowed. Contravention of the law could lead to a maximum fine of \$50,000 and 6 months' imprisonment.
- The trade should take note of the regulatory requirements regarding the use and labelling of food additives and comply with the related legislation.

# Advice for consumers

- Take a balanced diet and avoid excessive intake to particular substances because of picky eating.
- Purchase meat, meat products and cheese from reliable shops.
- Do not buy meat with abnormal colour.